



Borough of Staten Island, New York
Federal Emergency Management Agency
Cooperating Technical Community

Task Agreement #1- Refinement of Approximate Zone A Boundaries

In accordance with the CTC Memorandum of Agreement dated July 8, 1999, between the Borough of Staten Island, NY, and the Federal Emergency Management Agency, Task Agreement #1 is as follows:

1. **Objective and Scope:** The objective of this agreement is to refine and/or eliminate approximate Zone A flood zone boundaries in Staten Island. The source of these floodplains was originally delineated from the State of New York Freshwater Wetland Maps. FEMA will conduct technical analyses and floodplain mapping with data and technical support provided by Staten Island. There will be on-site visits to collect additional data needed for those flooding areas that cannot be resolved by presently existing analysis alone. Analyses will be of the 1% annual chance flood representing existing conditions and will encompass approximately 57.5 square miles of drainage area. The revised Zone A floodplain delineations will be used by FEMA to revise the November 16, 1983, February 15, 1991, and July 5, 1994, Flood Insurance Rate Map (FIRM) for the Borough of Staten Island. Staten Island will use the 1% annual chance flood elevations determined as part of this agreement for floodplain management in accordance with the provisions of Title 44 of the Code of Federal Regulations (CFR) 60.3(b)(4).
2. **Period of Performance:** This Task Agreement will begin on July 8, 1999, and end no later than November 12, 1999. This Task Agreement may be terminated at the option of FEMA or Staten Island in accordance with the provisions of the July 8, 1999, CTC Memorandum of Agreement.
3. **Funding/Cost-Sharing:**
4. **Standards:** The following standards and documents are relevant to this Task Agreement:
 - 1% annual chance (100-year) water surface elevations for approximate Zone A floodplain mapping will be determined using analyses consistent with the methods detailed in FEMA 265, *Managing Floodplain Development in Approximate Zone A Areas* (April 1995) and Chapter 6 of FEMA 37, *Guidelines and Specifications for Study Contractors* (January 1995). (FEMA 37 and FEMA 265 are available at FEMA's website at http://www.fema.gov/mit/tsd/EN_reg.htm) Staten Island and FEMA may expand on the approaches for analyzing Zone A areas outlined in FEMA 37 and FEMA 265 and/or develop new approaches as necessary. Such

July 8, 1999

approaches will be coordinated and agreed upon prior to commencement of analysis and mapping.

- Computer models used for hydrologic and/or hydraulic analyses must meet the requirements of 44 CFR 65.6(a)(6) and be listed on FEMA's *Numerical Models Accepted by FEMA for NFIP Usage* (http://www.fema.gov/mir/tod/EN_modl.htm).
- Topographic mapping used to delineate the Zone A floodplain boundaries must be of adequate scale and topographic definition to provide reasonable accuracy. Planimetric features must be compatible with the base map (with respect to horizontal accuracy) to be used by FEMA for Digital FIRM production. Topographic mapping taken from aerial photogrammetry or surveys must comply with the requirements of Appendix 4 of FEMA 37.
- For areas depicted as Zone A on the effective FIRM that have been altered by the placement of earthen fill, the requirements of 44 CFR 65.5(a) apply.

5. Deliverables:

Staten Island shall deliver to FEMA:

- Written summary of the approximate Zone A flood hazard areas that are in need of investigation, specifying the panel number and location of the erroneous floodplain, and indicating the action they are seeking and the reason why (removal, adjustment, etc.).
- All backup data, including as-built plans of piped areas. Staten Island will provide ongoing technical support and assistance, as needed.

FEMA shall provide to Staten Island:

- Written summary of the analysis methodologies used and any issues that were discussed and resolved from the site visit.
- All backup data, including supporting calculations and assumptions for any computed 1% annual chance water surface elevations. If computer models are utilized, input and output should be provided in both hardcopy and digital (CD-ROM, 3.5" diskette, or zip disk) format.
- Topographic work maps depicting the revised 1% annual chance approximate floodplain boundaries, designated as Zone A, for Staten Island's review and comment.

6. Schedule and Milestones:

Milestone 1: Tasks to be completed for the first milestone include:

- Final selection of flooding sources and limits to be studied. (by Staten Island)
- Selection of suitable topographic data for floodplain delineation. (by FEMA)
- Selection of analysis methodology. (by FEMA)

Deliverables for the first milestone include:

- A written summary of approximate Zone A floodplains of concern and annotated copies of effective FIRMs depicting limits of proposed revisions and/or Zone A areas to be added or deleted. (by Staten Island)

- Documentation of the proposed source of topographic data, including: scale; contour interval; source/methodology; date of survey/data collection; vertical and horizontal datums. (by FEMA)
- A written description of the proposed analysis methodology. (by FEMA)

The Borough's deliverables for Milestone 1 will be submitted to the FEMA Project Officer no later than August 6, 1999. FEMA's deliverables for Milestone 1 will be submitted to the CTC's Project Manager no later than August 20, 1999.

Milestone 2: Tasks to be completed for the second milestone include:

- Analysis of 1% annual chance flood elevations. (by FEMA)
- Site visit to discuss unresolved issues and collect additional data. (by FEMA/Staten Island)

Deliverables for the second milestone include:

- Written summary of the analysis methodologies used and any issues that were discussed and resolved from the site visit. (by FEMA)

The analyses will be completed by September 24, 1999 and the site visit will be completed by October 15, 1999.

Milestone 3 (Final Deliverable): Tasks to be completed for the third milestone include:

- Delineation of 1% annual chance floodplain boundaries. (by FEMA)

Deliverables for the third milestone include:

- Topographic work maps depicting 1% annual chance (Zone A) floodplain boundaries. (by FEMA)
- All supporting computations, including computer model input and output. (by FEMA)

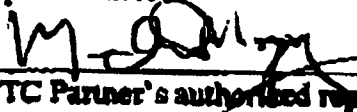
Final deliverables will be submitted to the CTC's Project Manager no later than November 12, 1999. The Borough will be given 30 days to review, comment, and submit any changes necessary. FEMA will then prepare preliminary revised FIRMs by February 29, 2000.

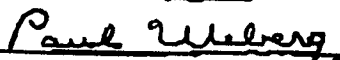
7. Certification: The following certifications apply to this task agreement (as appropriate):

- Hydrologic and/or hydraulic analyses and data will be certified by a registered professional engineer in accordance with 44 CFR 65.6(f).
- Topographic information must be certified by a registered professional engineer or licensed land surveyor in accordance with 44 CFR 65.5(c).
- If fill is to be considered in the mapping to raise land areas above the 1% annual chance flood elevation, certification of the fill must be provided in accordance with 44 CFR 65.5(a)(6) by the community's NFIP permit official, a registered professional engineer, or a licensed land surveyor.

- If fill is to be considered in the mapping to raise land areas above the 1% annual chance flood elevation, certification of the fill must be provided in accordance with 44 CFR 65.5(a)(6) by the community's NFIP permit official, a registered professional engineer, or a licensed land surveyor.
8. **Technical Assistance and Resources:** Staten Island may obtain copies of FEMA-issued Letters of Map Change (LOMC), archived engineering backup data, and data collected as part of the Five-Year Mapping Needs Assessment from FEMA's TEC. General technical and programmatic information, such as FEMA 265, the Quick-2 computer program, and the MT-2 forms can be downloaded from FEMA's Flood Hazard Mapping website (www.fema.gov/mhmap). Specific technical and programmatic support may be provided through FEMA's TEC; such assistance should be requested through the FEMA Project Officer specified in Section 12 of this agreement.
 9. **Subcontractors:** Not applicable
 10. **QA/QC Procedures:** All work will be subject to the TEC's quality control procedures in accord with the *Technical Evaluation Contractor Guidelines & Specifications*.
 11. **Reporting:** As specified in the deliverables
 12. **Points of Contact:** The FEMA Project Officer is Paul Weberg, P.E., and the CTC's Project Manager is Michael Nagy, P.E., or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities.

Each party has caused this Task Agreement to be executed by its duly authorized representatives


 CTC Partner's authorized representative


 FEMA authorized representative

7/8/99
 date

7/8/99
 date

June 8, 1999